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## (54) Title: NUCLEIC ACID SEQUENCING

## (57) Abstract

Provided is a method for sequencing DNA, which comprises: (a) obtaining a target DNA population comprising one or more single-stranded DNAs to be sequenced, each of which is present in a unique amount and bears a primer to provide a double-stranded portion of the DNA for ligation thereto; (b) contacting the DNA population with an array of hybridisation probes, each probe comprising a label cleavably attached to a known base sequence of predetermined length, the array containing all possible base sequences of that predetermined length; (c) removing all unligated probes; followed by the steps of: (d) cleaving the ligated probes to release each label; (e) recording the quantity of each label; and (f) activating the extended double-stranded portion to enable ligation thereto; wherein (g) steps (b) to (f) are repeated in a cycle for a sufficient number of times to determine the sequence of the or each single-stranded DNA by determining the sequence of release of each label.

